L 18760-65 EEO-2/EWT(d)/FSS-1/EEC-4/EEC(t)/EED-2 Pn-4/Pp-4/Pac-4/Pj-4

ACCESSION NR: AR5000808 S/0058/64/000/010/H020/H020

AUTHOR: Klovskiy, D. D.

SOURCE: Ref. zh. Fizika, Abs. 10Zh145

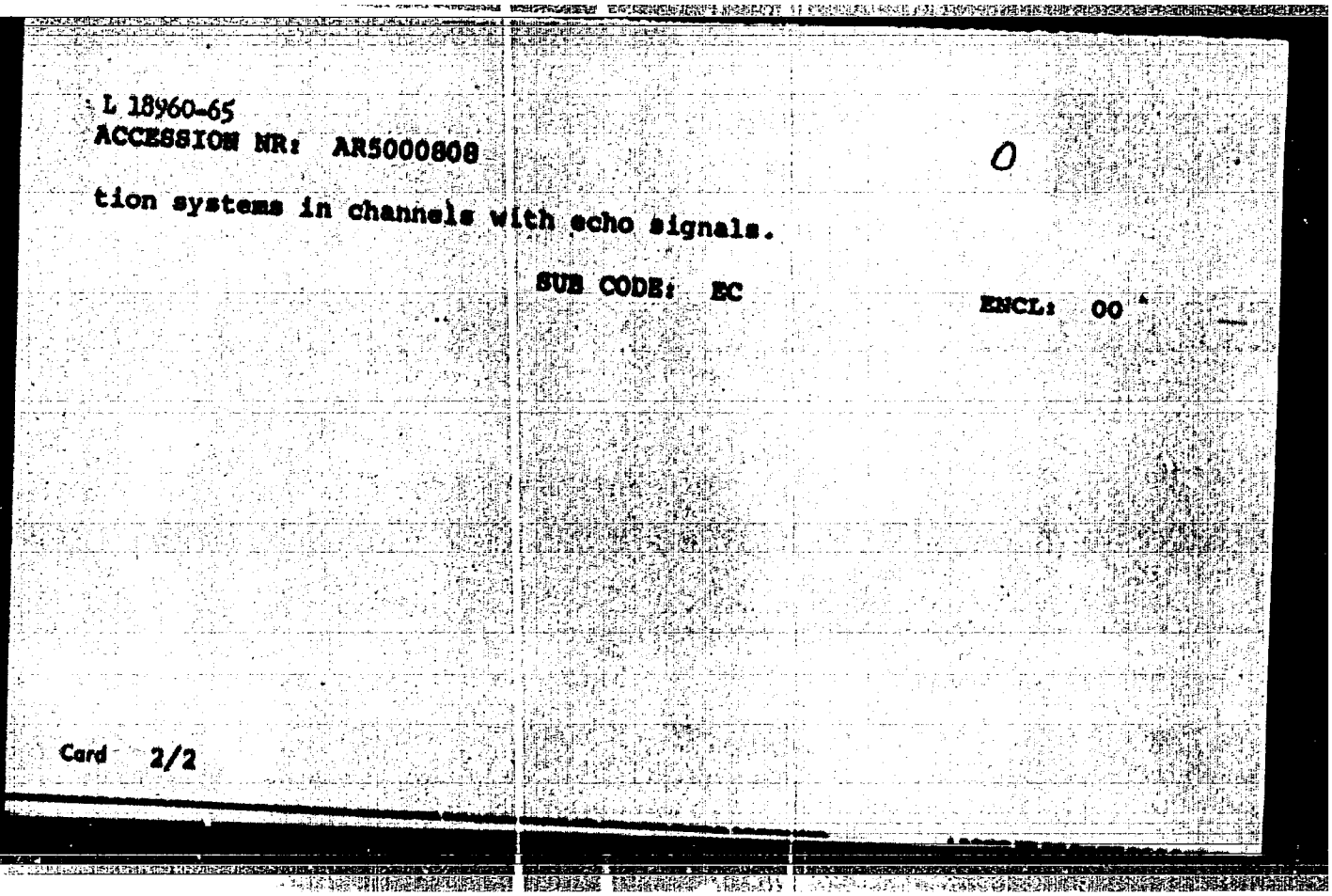
TITLE: Optimal reception system in channels with echo signals

CITED SOURCE: Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR, vyp. 19, 1964, 6-17

TOPIC TAGS: optimal receiver, coherent reception, fluctuation noise, echo signal

TRANSLATION: Criteria are analyzed for the optimal coherent reception in channels with echo signals and fluctuation noise, and their circuit realizations are considered, especially when using the SIIP-1 (system with trial pulse and prediction) communication system. A comparison is made of the qualities of different binary communica-

Card 1/2



L 18960-65
ACCESSION NR: AR5000808

0

tion systems in channels with echo signals.

SUB CODE: EC

ENCL: 00

Card 2/2

L 32841-65 FSS-2/EWT(d)/EEC-4/EWT(1)/EEC(t)/EEC-4/EED-2/EWA(h) Pn-4/Pp-4/
Pae-4/Peb/Pl-4

ACCESSION NR: AP5005577 S/0106/65/000/002/0009/0014

AUTHOR: Klovskiy, D. D.

TITLE: Noise immunity of binary systems with fluctuation and concentrated noises

SOURCE: Elektrosvyaz', no. 2, 1965, 9-14

TOPIC TAGS: noise suppression, frequency telegraphy, diversity reception

ABSTRACT: A binary single-band frequency-telegraph system with an active spacing is theoretically considered in which a fast channel fading occurs and an optimal (with regard to the fluctuation noise) narrowband decision circuit is used in the diversity reception. Two cases are reported: (1) With both fluctuation and concentrated (interference from other stations) noise, the probability p of error depends on the ratio h^2 of the average signal energy to the spectral density of fluctuation noise, on the ratio ξ^2 of the average powers of the signal and

Card 1/2

T 32841-65

ACCESSION NR: AP5005577

concentrated noise, on the number of diversity branches, and on the probability p_o of concentrated noise in an individual diversity branch; (2) If $p_o = 1$ and $\varepsilon^2 > 3$ in all branches, an increase in the number of diversity branches results in a higher noise immunity, the step, however, being considerable (18 db) only when single reception is replaced by double; (3) With lower p_o, the reliability of communication requires much lower ε^2 than in the case when $p_o = 1$; (4) In practice, those types of diversity which diminish the probability of arrival of concentrated noise to the greater part of the branches should be preferred. Orig. art. has: 21 formulas.

ASSOCIATION: none

SUBMITTED: 10Apr64 ENCL: 00 SUB CODE: EC

NO REF SOV: 003 OTHER: 000

Card 2/2

L 1286-66 EWT(d)/FSS-2/EED-2

ACCESSION NR: AR5008079 UR/0274/65/000/001/A006/A007

621.391.18

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz'. Svodnyy tom, Abs. 1A51

AUTHOR: Klovskiy, D. D. 44

TITLE: Optimal-reception system for channels with echo-signal

CITED SOURCE: Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR, vyp. 19, 1964, 6-17

TOPIC TAGS: radio reception, optimal radio reception, radio channel with echo signal

TRANSLATION: Criteria of optimal coherent reception in echo-signal channels with a fluctuation noise are analyzed, and their circuit realizations are considered. If the channel is piecewise-ideal, then, with equal-probability signals, an optimal coherent receiver, which analyzes the arriving signal z(t) within 0 through T, must record a position i when this set of inequalities is satisfied:

$$\int_0^T z(t) X'_{i,0}(t)\,dt - Q_i > \int_0^T z(t) X'_{j,0}(t)\,dt - Q_j, \quad (1)$$

$$j = 1, 2, \ldots, m \ (i \neq j).$$

Card 1/4

Here, $X'_{i,s}(t)=\sum_{r=1}^{N} X'_{i,r}(t-\Delta t_{i,r})\,h(t-\Delta t_{i,r})$ is the expected multipath signal carrying the information regarding the i position; $\Delta t_{i,r}$ is the relative delay of r beam; N is the number of beams in the channel; $X'_{i,r}(t-\Delta t_{i,r})\,h(t-\Delta t_{i,r})$ is the signal at the point of reception caused by the r beam, where $h(t-\Delta t_{i,r})=\begin{cases}1 & 0<t-\Delta t_{i,r}<T\\ 0 & T<t-\Delta t_{i,r}<0.\end{cases}$ The threshold level is $0_i=\frac{1}{2}\int_0^T X'_{i,s}(t)\,dt+\int_0^T g_s(t)\,X'_{i,s}(t)\,dt$; where $g_s(t)$ is the signal at the point of reception due to previous sendings whose number was not over $S=\left[\frac{\Delta t_{max}}{T}\right]$.

Presenting the reception criterion (1) in this form:

$$\sum_{r=1}^{N}\int_0^{T-\Delta t_r} s(t+\Delta t_r)\,X'_{i,r}(t)\,dt-0_i>\sum_{r=1}^{N}\int_0^{T-\Delta t_r} s(t-\Delta t_r)\,X'_{j,r}(t)\,dt-0_j \qquad (2)$$

and considering that, under certain conditions, the threshold levels 0_i are independent of i, the criterion (2) will have the form:

$$\sum_{r=1}^{N}\int_0^{T} s(t+\Delta t_r)\,X'_{i,r}(t)\,dt>\sum_{r=1}^{N}\int_0^{T} s(t+\Delta t_r)\,X'_{j,r}(t)\,dt. \qquad (3)$$

Block diagrams of a receiver realizing the criteria (1) and (2) are given. The criterion (2) ensures better energy relations than (1) because it better utilizes the beam energy, and it also makes the receiver simpler. The use of the above optimal-reception criteria presupposes a knowledge of the parameters of individual beams at the point of reception. This problem can be facilitated by using the correlation techniques and noise-like signals with a sufficiently broad base. In many cases, such systems of communication are inapplicable, e.g., where the channel frequency band is limited. The applicability of the optimal-reception criteria can be broadened by covering the communication systems with a test pulse and prediction (SIIP-1). In the synchronous SIIP-1 system, a test pulse with a duration equal to that of the information pulse is transmitted periodically, with a period $\tau_u = M$ (M is an integer) along the radio channel. Similar to (1), an optimal-coherent-reception criterion, with a known channel response to the test pulse $g_{i,k}$ can be written in this form:

$$\int_0^T z(t)\, g_{i,1}(t)\, dt - \theta_i > \int_0^T z(t)\, g_{j,1}(t)\, dt - \theta_j. \qquad (4)$$

where the threshold is:

$$\theta_i = \frac{1}{2}\int_0^T g_{i,1}^2(t)\, dt + \int_0^T g_{s0}(t)\, g_{i,1}(t)\, dt. \qquad (5)$$

L 1286-66
ACCESSION NR: AR5008079

The criterion (4), unlike (1), presupposes only a knowledge of the overall channel reaction to the test signal, not the parameters of individual beams. The noise immunities of five types of binary communication systems are compared; optimal coherent reception in a 2-beam channel, fluctuation noise, fixed average rate of information transmission I bits per sec, and Rayleigh amplitude fading are assumed. It is proven that the binary communication systems are powerwise more favorable for high rates of information transmission over radio channels with echo signal and that the generalized performance index for a communication system with separating intervals between the packets is lower than for other communication systems. The SHP-1 system efficiency is considered. Bibl. 6.

SUB CODE: EC ENCL: 00

Card 4/4

L 49262-65 EEC-2/EWT(d)/FSS-2/EWT(1)/EEC-4/FCS(f)/EED-2/EWA(c) Pn-4/Pp-4/
Pac-4/Peb/Px-4 JM
ACCESSION NR: AP5008394 S/0108/64/019/012/0024/0034

AUTHOR: Klovskiy, D. D. (Active member)

TITLE: Potential noise immunity in channels with echo signals

SOURCE: Radiotekhnika, v. 19, no. 12, 1964, 24-34

TOPIC TAGS: multipath radio channel, noise immunity

ABSTRACT: The potential noise immunity (NI) is considered of binary communication systems in a two-path channel under fluctuating noise and noncorrelated Rayleigh fadings in the paths. With respect to their NI, these binary systems are compared: (1) Single-path reception (spatial selection); (2) AME System described by J. Hollis (Electronics, v. 32, no. 25, 1959); (3) SIIP-1 System described by the author (Trudy uchebnykh institutov svyazi, no. 19, 1964); (4) System with guard intervals $\tau = \Delta t_{max}$ between the information packets on the sending end and with analysis of the received signals within $T + \Delta t_{max}$; (5) Broadband system with noise-like signals and with received-signal analysis within $T + \Delta t_{max}$ (R. Price and P. Green, PIRE, v. 46, no. 3, 1958); (6) System with a truncated integration on the receiving end in which the beginning of each packet is

Card 1/2

L 47262-65
ACCESSION NR: AP5008394

cut off (e.g., "Kineplex"). These findings are reported: (1) For obtaining high speeds of information transmission over the radio channels with echo signals, the binary systems are preferable powerwise; the transmission speed is ensured by a shorter packet, not a greater number of frequency-multiplexed channels; (2) Using the energy of additional paths materially enhances the system NI; (3) A generalized performance index for the guard-interval system is lower than that for other narrow-band systems at high transmission speeds; hence, this system does not hold much promise; (4) The SIIP-1 system is the most efficient; (5) In a piecewise-perfect channel with echo signals, the most promising seems to be the PSK combined with suppressing harmful effects of additional paths. Orig. art. has: 50 formulas and 2 tables.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi (Scientific and Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED: 14Feb63 ENCL: 00 SUB CODE: EC

NO REF SOV: 003 OTHER: 005

Card 2/2

L 41108-66 EWT(d)/FSS-2

ACC NR: AR6014594 SOURCE CODE: UR/0274/65/000/012/A003/A004

31
6

AUTHOR: Klovskiy, D. D.

TITLE: Transmitting capacity of radio channels with fading

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 12A36

REF SOURCE: Tr. Uchebn. in-tov svyazi, vyp. 25, 1965, 27-32

TOPIC TAGS: ~~transmitting capacity~~, radio transmission, radio transmitter

ABSTRACT: A formula is derived for calculating the transmitting capacity of channels of the χ^2 type with fadirg in which the amplitudes or the channel transmission coefficient γ have an M-distribution. Reception is spaced with autoselection. In the case of slow fading the trarsmitting capacity C_B is determined approximately by averaging over γ_0 the transmitting capacity of a piecewise-ideal channel with an average signal power at the point of reception $\gamma^2 P_0$:

$$C_B \approx \int_0^\infty \omega_B(\gamma_0) F_c \ln\left(1+\frac{\gamma_0^2 P_c}{\sigma F_c}\right) d\gamma_0 \text{ nat. un./sec.}$$

Here P_c is the average signal power at transmission, γ_0 is the maximum channel transmission coefficient, $\omega_B(\gamma_0)$ is the probability density function of the

Card 1/2 UDC: 621.391.18

L 02217-67 EWT(d)/FSS-2

ACC NR: AR6013686 SOURCE CODE: UR/0058/65/000/010/H015/H015

AUTHOR: Klovskiy, D. D.

66

TITLE: Carrying capacity of a radio channel subject to fading

SOURCE: Ref. zh. Fizika, Abs. 10Zh108

REF. SOURCE: Tr. Uchebn. in-tov svyazi, vyp. 25, 1965, 27-32

TOPIC TAGS: diversity reception, communication channel, high capacity transmission, radio wave absorption, binary code

ABSTRACT: The author determines the carrying capacity of radio channels with fading of the type χ^2 (m-distribution of the amplitudes) using diversity reception with automatic selection. The author determines also the carrying capacity of these channels in the case of single reception (when the condition that only binary codes be received is imposed. [Translation of abstract]

SUB CODE: 17

Card 1/1 LC

ACC NR: AP6033677

between the beams; the increase range is: from $1+\beta$ with $\Delta t = 0$ to $\sqrt{\beta}/3p$ (in the small-error region) with $\Delta t \geq T$; here, β - ratio of beam dispersions, T - packet duration. With $\alpha = \Delta t/T < 1$, the energy gain is only $1/\sqrt{\alpha(2-\alpha)}$ of its maximum value. Orig. art. has: 1 figure and 50 formulas.

SUB CODE: 09 / SUBM DATE: 12Oct64 / ORIG REF: 003 / OTH REF: 001

Card 2/2

ACC NR: AP7002717 (A) SOURCE CODE: UR/0381/66/000/006/0035/0042

AUTHOR: Oshchepkov, P. K.; Kloyev, V. V.; Degterev, A. P.; Semenov, O. S.; Lyubynskiy, Ye. A.

ORG: Scientific Research Institute of Introscopy (NII introskopii)

TITLE: VTDN-1 installation for monitoring surface defects in ferromagnetic pipes

SOURCE: Defektoskopiya, no. 6, 1966, 35-42

TOPIC TAGS: pipe, ferromagnetic material, eddy current, nondestructive test/ VTDN-1 flaw detector

ABSTRACT: The authors describe an eddy-current flaw detector with contact-type pickups (type VTDN-1), intended to disclose external cracks, beads, films, deep scratches, hairlines and other defects on the outer surface of hot-rolled ferromagnetic pipes. The secondary-field indicator is a resonant pickup which is placed in contact with the pipe and which consists of a pair of coils. During the test, the pickup rotates around the linearly-moving pipe, thereby scanning the investigated surface along a helical line. The signals from the pickup are detected with a resonant amplifier. The operating principle is based on eddy currents induced in the pipe and an automatic comparison of two adjacent sections of the surface by two pipes. The apparatus consists of mechanical equipment for rotating the pickups, an oscillator block, pickup blocks, an interconnection block, amplifier blocks, an induction block, a blocking and synchronization block, a tuning indicator, and a power supply.

Card 1/2

UDC: 620.179.14

ACC NR: AP7002717

The instrument was tested at the Pervoural'skiy Novotrubnyy plant and was found suitable for nondestructive quality control of the outer surface of hot-rolled tubes. It is indicated that by slight modification it can be used for continuous monitoring of pipes as they are produced. Orig. art. has: 3 figures.

SUB CODE: 14/ SUBM DATE: 07Feb66

Card 2/2

KLOYZNER, I.M.

Experience in organizing the work of the laboratory of the District Sanitary and Epidemiological Station. Lab.delo 9 no.3:61-62 Mr '63. (MIRA 16:4)

1. Buyskaya rayonnaya sanitarno-epidemiologicheskaya stantsiya.
(BUY—MEDICAL LABORATORIES)

KLOYZNER, Kh.M. (Perm')

Some proposals concerning the planning of the cost of production of clothing. Shvein. prom. no. 6:31-33 N-D '65. (MIRA 18:12)

KLOYZNER, Kh.M. (Perm')

Adopting the methodology for the analysis of fabric utilisation in the clothing industry. Shvein.prom. no.5:32-34 S-O '63. (MIRA 16:12)

KOYZNER, Kh.M. (Perm')

Experience in the generalization of information on the assortment of basic fabrics. Shveinaia prom. no.2:31-35 My-Ag '65.

(MIRA 18:6)

KLOZ, I.

Protein characteristics of plants, their qualitative analysis and quantitative determination of the degree of their structural similarity by serological methods. Fiziol.rast. 9 no.4:496-501 '62. (MIRA 15:9)

1. Biological Institute of Czechoslovakian Academy of Sciences, Prague.
(PROTEINS) (PLANTS--CHEMICAL ANALYSIS) (SEROLOGY)

KLOZ, J.

New type of apparatus for measuring the quantity of water absorbed by plants. Chekh.biol. 2 no.4:235-240 Ag '53. (MLRA 7:4)

1. Institut biologii ChSAN, Fiziologiya rastenii, Praga.
(Botanical apparatus) (Plants--Transpiration)

KLOZ J

CZECHOSLOVAKIA/General Biology. Genetics. Plant Genetics. D

Abs Jour: Ref Zhur-Biol., No 17, 1958, 76338.

Author : Kloz, Josef.
Inst :
Title : Influence of Vaccinations on the Changeability of Plants ("Vegetative Hybridization").

Orig Pub: Ceskosl. biol., 1957, 6, No 6, 401-415.

Abstract: No abstract.

Card : 1/1

KLOZ, J.

CZECHOSLOVAKIA / General Biology. Genetics B-5

Abs Jour : Ref Zhur - Biol., No 11, 1958, No 47629

Author : Klos, J.
Inst : Not given
Title : On the Vegetative Hybridization of Plants.

Orig Pub : Vesmir, 36, No 6, 182-184 (1957)

Abstract : Bean scions of markedly lower urease activity were grafted onto soya stocks having high urease activity. Grafting on soya stocks did not lead to an intensification of the urease activity of the bean grains. Serological investigations have shown that the protoins in the bean scions are likewise unaffected. Thus no effect of the stock on the scion could be detected by the two biochemical methods used. However, when tomatoes of the Iran variety are grafted onto cleavers (Lycium halimifolium Mill) for four generations, the appearance of new morphological types (a change in the

Card 1/2

KLOZOVA, Eva; KLOZ, Josef

The identification of hybrids of Phaseolus vulgaris L. Phaseolus coccineus L. using immunochemical methods. Biologia plantarum 6 no. 3:240-241 '64.

1. Institute of Experimental Botany, Czechoslovak Academy of Sciences, Prague - Dejvice, Na ovcisti 2.

KLOZ, Josef

An investigation of the protein characters of four Phaseolus species with specil reference to the question of their phylogenesis. Biologia plantarum 4 no.2:85-90. '62.

1. Institute of Experimental Botany of the Czechoslovak Academy of Sciences, Praha - Dejvice, na Cicisti 2.

KLOZ, Josef; TURKOVA, Vera

Legumin, vicilin and similar proteins in the seeds of some species of the Vicioideae family; a comparative serological study. Biologia plantarum 5 no.1:29-40 '63.

1. Institute of Experimental Botany, Czechoslovak Academy of Sciences, Praha - Dejvice, Na ovcisti 2.

KLOZAKOVA, E.; ROKOSOVA, K.

Anthocyanins of the Impatiens holstii. Biologia plantarum 3 no.4:291-296 '61.

1. Department of Plant Physiology and Physiological Genetics, Institute of Biology, Czechoslovak Academy of Sciences, Praha - Dejvice, Na ovcisti 2.

CZECHOSLOVAKIA. / Chemical Technology. Chemical Products and Their Applications. Fats and Oils. Waxes. Soaps and Detergents. Flotation Agents. H-25

Abs Jour: Ref Zhur-Khimiya, No 3, 1959, 9828.

Author : Klozar, V.
Inst : Not given.
Title : Composition of the Fat Mixture and Internal Soap Structure.

Orig Pub: Prumysl potravin, 1958, 9, No 4, 184-188.

Abstract: The chemistry and current methods of soap production are briefly described, and also the composition of the fat mixture and the relation of soap properties to its internal structure. Even though the crystalline structure of soap

Card 1/2

CZECHOSLOVAKIA / Chemical Technology. Chemical Products and Their Applications. Fats and Oils. Waxes. Soaps and Detergents. Flotation Agents. H-25

Abs Jour: Ref Zhur-Khimiya, No 3, 1959, 9882.

Author : Klozar, V.
Inst : Not given.
Title : Continuous Methods and Course of Development in the Soap-Manufacturing Industry.

Orig Pub: Prumysl potravin, 1958, 9, No 5, 250-254.

Abstract: No abstract.

Card 1/1

301

CARD:

KLIZAR, V.

AUTHORS: Čůta, F. and Klezar, V. CZ/8-52(82)-10-9/39

TITLE: Coulometric Determination of Styrene and Methyl Oleate At Simultaneous Occurrence (Coulometrické stanovení styrenu a methyloleátu vedle sebe)

PERIODICAL: Chemické Listy, 1958, Vol.52(82), Nr 10, pp 1898 - 1902 (Czechoslovakia)

ABSTRACT: Methyl oleate cannot be determined coulometrically in the presence of styrene by utilising the values of their equilibrium addition constants with iodine (Ref.1) because iodine is added very slowly to both substances. It was, however, found that bromine is added at a 13 times faster rate to methyl oleate (Ref.2). Preliminary experiments proved that coulometric addition of bromine proceeds most satisfactorily in relatively concentrated solutions of acetic acid which contains a few percent of hydrogen bromide or hydrogen chlorine. Chlorene adds to both substances so quickly that their total quantity can be determined. The styrene was titrated coulometrically in a 0.5 - 1.5 n-HCl solution in 13-14n-CH_3COOH. The end point was very clearly visible. The maximum error for 1 mg styrene is ±1%, and the average error ±0.15%. During the estimation of styrene

Card 1/3

with bromine, the concentration of acetic acid was changed whilst the concentration of hydro-bromic acid was kept constant at 0.04N. It was found that the titration in this case could only be carried out quantitatively in solution 9N - 13N-CH_3COOH if they contain simultaneously 0.1N - 1N-HBr (Fig.2). During the estimation of methyl oleate, it was also found that the stoichiometric requirements of bromine reaches in solution 10.6N-13.0N-CH_3COOH at a simultaneous concentration of 0.1N-1N-HBr. Fig.3 gives titration curves for mixtures of styrene and methyl-oleate and Fig.4 the influence of the ratio of methyl-oleate and styrene in a solution of 13N-CH_3COOH and 0.1N-HBr on titration of methyl-oleate. In a solution with considerably higher molar concentration of styrene up to 10% more methyl-oleate was found. At lower excess of styrene the errors in estimation are smaller, but only at an approximately

Card 2/3

9-fold excess of methyl-oleate. The estimation of styrene is substantially accurate. Under these conditions a 98.6% theoretical consumption of bromine was achieved when only methyl-oleate was titrated. There are 4 Figures and 10 References: 2 Czech, 7 English and 1 German.

ASSOCIATION: Katedra speciálních a fysikálních metod analytických, Vysoká škola chemicko-technologická, Praha, a Výzkumný ústav pro tuky a oleje, Ústí n. Labem (Department for Special and Physical Analytical Methods, Institute for Chemical Technology, Prague, and Research Institute for Oils and Fats, Ústí n. Labem)

SUBMITTED: 22nd August, 1957

Card 3/3

KLOZAR, V.; CUTA, F.

" Coulometric determination of styrol and methyl oleate in the presence of each other." In German. p. 1182.

COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS, Praha, Czech., Vol. 24. no. 5, May 1959

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 6, Sept. 59
Unclassified

ACCESSION NR: AP4034926 S/0181/64/006/005/1439/1448

AUTHORS: Sokol'skaya, I. L.; Noymann, Kh.; Klose, E.

TITLE: A study of surface migration of molybdenum by the method of field emission

SOURCE: Fizika tverdogo tela, v. 6, no. 5, 1964, 1439-1448

TOPIC TAGS: field emission, surface migration, molybdenum, autoelectronic current, activation energy

ABSTRACT: The authors used the method discussed by I. L. Sokol'skaya (ZhTF, 26, 1177, 1956; Izv. AN SSSR, 20, 1151, 1956). They determined the activation energy for the surface migration of Mo atoms along the natural lattice from a study of the temperature dependence of the time behavior and of the autoelectronic current on heating a point of monocrystalline Mo in a strong electrical field. The activation energy was found to be 2.00 ± 0.15 ev. Without the electrical field, the migration energy proved to be 2.86 ± 0.15 ev. The authors show that the difference between these values cannot be ascribed to any decrease in binding energy between surface atoms in a strong field. The effect of the field on activation energy is found to be negligible. The coefficient of surface tension, roughly computed, is 2600 dynes/cm. When the crystal point was heated in a field of positive polarity (at

Card 1/2

ACCESSION NR: AP4034926

the very end of the rearrangement process on the {001} faces) emission became very marked, increasing with time during constant anode potential. The increase in current, accompanying intense illumination in the (001) zone, frequently led to destruction of the point. This phenomenon did not appear during heating at the opposite polarity, which leads to the conclusion that it is due to the adsorption of active gases, which separate from the screen through electron bombardment and orient themselves on the surface because of the strong field. Orig. art. has: 11 figures and 1 table.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: 28Nov63 ENCL: 00

SUB CODE: MM, EC NO REF SOV: 002 OTHER: 020

Card 2/2

ACCESSION NR: AP4039663 S/0181/64/ 006/006/1744/1749

AUTHORS: Noymann, Kh.; Kloze, E.; Sokol'skaya, I. L.

TITLE: Study of diffusion processes in rhenium with the aid of a field emission microscope

SOURCE: Fizika tverdogo tela, v. 6, no. 6, 1964, 1744-1749

TOPIC TAGS: diffusion process, rhenium, field emission microscope, activation energy, tungsten, thermal conductivity, body centered lattice, face centered lattice

ABSTRACT: The process of the change of form of monocrystalline points in rhenium under the influence high temperature and strong field was investigated with the aid of a field emission microscope. The method used for measuring the activation energy of this process was described by I. L. Sokol'skaya, Kh. Noymann, and E. Kloze (FTT 6, 1439, 1964). The rhenium emitter prepared by the method described by G. N. Fursey (Avtoref. Diss. LGU, 1963) was welded to a tungsten loop from a wire 0,112 mm in diameter 50 mm long. The measurements were taken in a temperature range of 1200-1800K. The residual pressure in the apparatus was 10^{-10} mm Hg. The value for the energy of activation in the presence of a

Card 1/2

ACCESSION NR: AP4039663

field was 1.5 ± 0.15 ev, while the energy of activation in the absence of field had the values of 1.5 ± 0.15 ev and 5.3 ± 0.5 ev. Orig. art. has: 2 sets of photographs and 4 figures.

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet (Leningrad State University)

SUBMITTED: 03Jun64 ENCL: 00

SUB CODE: SS NO REF SOV: 003 OTHER: 027

Card: 2/2

KLOZE, Jerzy, mgr inz.

Studies on the siltation of the inlet of the Laczanski Canal.
Gosp wodna 22 no.9:429-430 S '62.

1. Zaklad Hydrotechniki, Instytut Gospodarki Wodnej, Warszawa.

KLOZOVA, Eva; KLOZ, Josef

The identification of hybrids of Phaseolus vulgaris L. Phaseolus coccineus L. using immunochemical methods. Biologia plantarum 6 no. 3:240-241 '64.

1. Institute of Experimental Botany, Czechoslovak Academy of Sciences, Prague - Dejvice, Na ovcisti 2.

KLOZOVA, EVA

SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: not given

Affiliation: Department of Plant physiology and physiological Genetics, Institute of Biology, Czechoslovak Academy of Sciences, Prague, (Original version not given)

Source: Prague, Biologia Plantarum, Vol 3, No 4, 1961; pp 291-296

Data:

Antocyanins of Impatiens holstii (Antokyany u Impatiens holstii)

KLOZOVA, Eva
ROKOSOVA, Kveta

(FD 98164)

KLOZOVA, Eva

Effect of the acute irradiation of balsam seeds (Impatiens balsamina L.) on the formation of anthocyanins in blossom. Biologia plantarum 4 no.3:246-254 '62.

1. Institute of Experimental Botany, Czechoslovak Academy of Sciences, Praha.

KLOZOVA, Eva

Production of anthocyanins in Impatens balsamina L. blossoms after acute irradiation of the uncolored petals. Biologia plantarum 5 no.2:120-123 '63.

1. Institute of Experimental Botany, Czechoslovak Academy of Sciences, Praha 6 - Dejvice, Na cvicisti 2.

KLUBA, Z.

Description of a reinforced-concrete dam and concrete spillway.

p. 256
Vol. 15, no. 6, June 1955
GOSPODARKA WODNA
Warszawa

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 2
Feb. 1956

KLUBALOVA, J.

M

9

*Use of Complexones in Chemical Analysis. VI.--Colorimetric Determination of Chromium. R. Přibil and J. Klubalová (Coll. Trav. Chim. Tchécoslov., 1950, 15, (1/2), 42-51).--[In English]. (V. abst., p. 31; see abstract below. The purple-red complex formed by Cr^{III} and ethylenediamine tetra-acetic acid may be used to determine 0·1-8 mg. of Cr (III) c.c. of solution either photoelectrically or spectrophotometrically.--F. M. L.

ALEKSEYEV, V.M., kand.tekhn.nauk; KLUBAYEV, O.I., insh.

Synchronous ship generators with water cooled rotor and stator coils. Sudostroenie 27 no.11:36-41 N '61. (MIRA 15:1)
(Electric generators)
(Marine engineering)

KLUBERT, S.

GEOGRAPHY & GEOLOGY

Periodicals: KRASY SLOVENSKA. Vol. 35, No. 11, Nov., 1958.

KLUBERT, S. From the area of Levoca. p. 428.

Monthly List of East European Accessions (EEAI) LC Vol. 8, No. 4, April 1959.
Unclass.

KLUBICKA, Vladimir, ins. oec.

Funds for the development of business in electric industries realized by a simplified production. Elektroprivreda 15 no.2/3:99-107 F-Mr '62.

1. ZEP BiH, Sarajevo.

KLUBICKA, Vladimir, dipl. ek.

Fourth conference of the economists of electric industries of Yugoslavia. Elektroprivreda 17 no.4/5:187-193 Ap-My '64

L 54963-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Pg-4 RPL WW/RM

ACCESSION NR: AP5014188 UR/0080/65/038/005/1188/1191

678.13

33
32
B

AUTHOR: Klubikova, L. Ya.; Klimova, O. I.; Yarosh, A. Y.

TITLE: Copolymerization of vinylenecarbonate and vinylacetate using redox initiator systems

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 5, 1965, 1188-1191

TOPIC TAGS: copolymerization, vinylenecarbonate, vinylacetate, redox initiator, polymerization initiator

ABSTRACT: The effect of oxygen, mixing, temperature, and pH on copolymerization of vinylenecarbonate with vinylacetate and the composition of the copolymer was studied in order to determine optimal reaction conditions. The study was done in an aqueous medium using the following redox initiators: $FeCl_3$ + ZnO + UV irradiation; N_2H_4 + + $CuSO_4$; $H_2C_2O_4$ + UV irradiation; and $(NH_4)_2S_2O_8$ + ascorbic acid. There has been no reference in the literature as to the use of the "$(NH_4)_2S_2O_8$ + ascorbic acid" system as a copolymerization initiator for vinylenecarbonate and vinylacetate. The highest copolymer yields (in the range from 60 to 70% O were obtained at 20°C using a

Card 1/2

L 54963-65
ACCESSION NR: AP5014160

starting monomer ratio of 20 mol % of vinylenecarbonate to 80 mol % of vinylacetate, water:monomer ratio 4:1, 0.01 mol % per liter of $(NH_4)_2S_2O_8$, and 0.01 mol per liter of ascorbic acid. The copolymerization proceded for 48 hours. Depending upon actual composition the copolymer has a characteristic viscosity in dimethylformamide $[\eta]_{20^\circ}$ varying from 1 to 2.5. Orig. art. has: 3 figures and 3 tables.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Institute of Technology)

SUBMITTED: 04Jul64 ENCL: 00 SUB CODE: OC,OC

NO REF SOV: 003 OTHER: 003

Card 2/2

KLUBIKOVA, O.F.

Realization of Lenin's ideas about the communist attitude toward work. Sbor. st. LITMO no.49:82-97 '60. (MIRA 15:1)
(Lenin, Vladimir Il'ich, 1870-1924)
(Labor and laboring classes)

KLUBIN, P. I.

Mathematical Reviews
Vol. 14 No. 11
December, 1953
Mechanics

Klubin, P. I. The calculation of circular and circular plates on an elastic foundation. (Russian) Trudy Leningrad. Inst. Inzhen. Kommunal. Stroitel'stva Sbornik 12, 93–135 (1952).

The theory of plates on an elastic foundation, as well as tables and practical methods of computation for engineers, are given by various investigators and the subject, from the point of view of applications, is almost completely covered. All the existing methods, though, require long and complicated computations, and tables are often inaccurate. The author of this work claims that his method is simpler, requires fewer computations, and is sufficiently accurate.

The author begins with plates of infinite length, constant thickness, and constant width (equalling $2l$). The distributed load is independent of the length of the plate, being a function of the width only. The problem of such a plate can be reduced to the problem of a beam on an elastic foundation, whose width equals a unit, and whose length equals $2l$. The determination of vertical displacements involves the well known fourth-order differential equation and the condition that the vertical displacement equals the sag of the foundation. The author's method consists of assuming that the sag of the foundation is an expression containing a series of Chebyshev polynomials. This assumption gives a very simple relation between the sag and the reaction of the foundation, the latter also containing a series of Chebyshev

polynomials. By taking no more than four terms of the series the problem is reduced to a system of two simultaneous algebraic equations. The author presents solutions for the following cases of loading: (1) constant loads over the whole plate; (2) constant loads equal but in opposite directions acting on the edges $x=l$, $x=-l$; (3) constant loads in the same direction along the lines $x=a$, $x=-a$.

Next, the author considers plates similar in shape to the first kind, but non-uniform in this respect that the central strip between the lines $x=a$, $x=-a$, has a different moment of inertia from the edge strips. He applies the same method as before but the approximations are not as good as for the first kind of plates. Numerous different cases of loading are presented.

Finally, the author investigates symmetrically loaded circular plates of constant thickness on an elastic foundation. As in the previous cases, the deflection governed by a fourth-order differential equation must equal the sag of the foundation. This time the equation in polar coordinates is not so simple. The author adopts a similar procedure as before, he assumes that the reaction of the foundation and the sag can be expressed as a series of even Legendre polynomials, retains a certain number of terms and reduces the problem to a system of algebraic equations. Like the differential equations, the expressions for vertical displacements are also more complicated, and the author appends tables with numerical values of certain terms in the expressions.

T. Lazer (Lexington, Ky.).

KLUBIN, P.I.; SOKOLOVSKIY, V.V., chlen korrespondent.

Calculation of lock and dock bottoms. Izv. AN SSSR. Otd.tekh.nauk. no. 3:364-376 Mr '53. (MLRA 6:5)

1. Akademiya nauk SSSR (for Sokolovskiy). (Hydraulic engineering)

KLUBIN, V.P., inzh.; MARYUTA, A.N., inzh.

Possibility of raising the frequency of natural oscillations of an amplidyne for use as a low-frequency current generator in the automation of mine hoisting machinery with an asynchronous drive. Izv. vys.uchab. zav.; gor. zhur. 6 no. 12:197-202 '63. (MIRA 17:5)

1. Institut gornogo dela AN UkrSSSR imeni Fedorova (for Klubin). 2. Dnepropetrovskiy ordena Trudovogo Krasnogo Znameni gornyy institut imeni Artema (for Maryuta). Rekomendovana kafedroy avtomatizatsii proizvodstvennykh protsessov Dnepropetrovskogo ordena Trudovogo Krasnogo Znameni gornogo instituta imeni Artema.

GARKUSHA, N.O., kand. tekh.n. nauk; KLUBIN, V.P., inzh.; MARYUTA, A.N., inzh.

Using dynamic braking and low-frequency currents to automatically control the asynchronous drive of a hoist. Izv. vys. ucheb. zav.; gor. zhur. 6 no.6:147-153 '63. (MIRA 16:8)

1. Institut gornogo dela AN UkrSSR (for Garkusha, Klubin).
2. Dnepropetrovskiy ordena Trudovogo Krasnogo Znameni gornyy institut imeni Artema (for Maryuta).
(Mine hoisting—Electric driving)
(Automatic control)

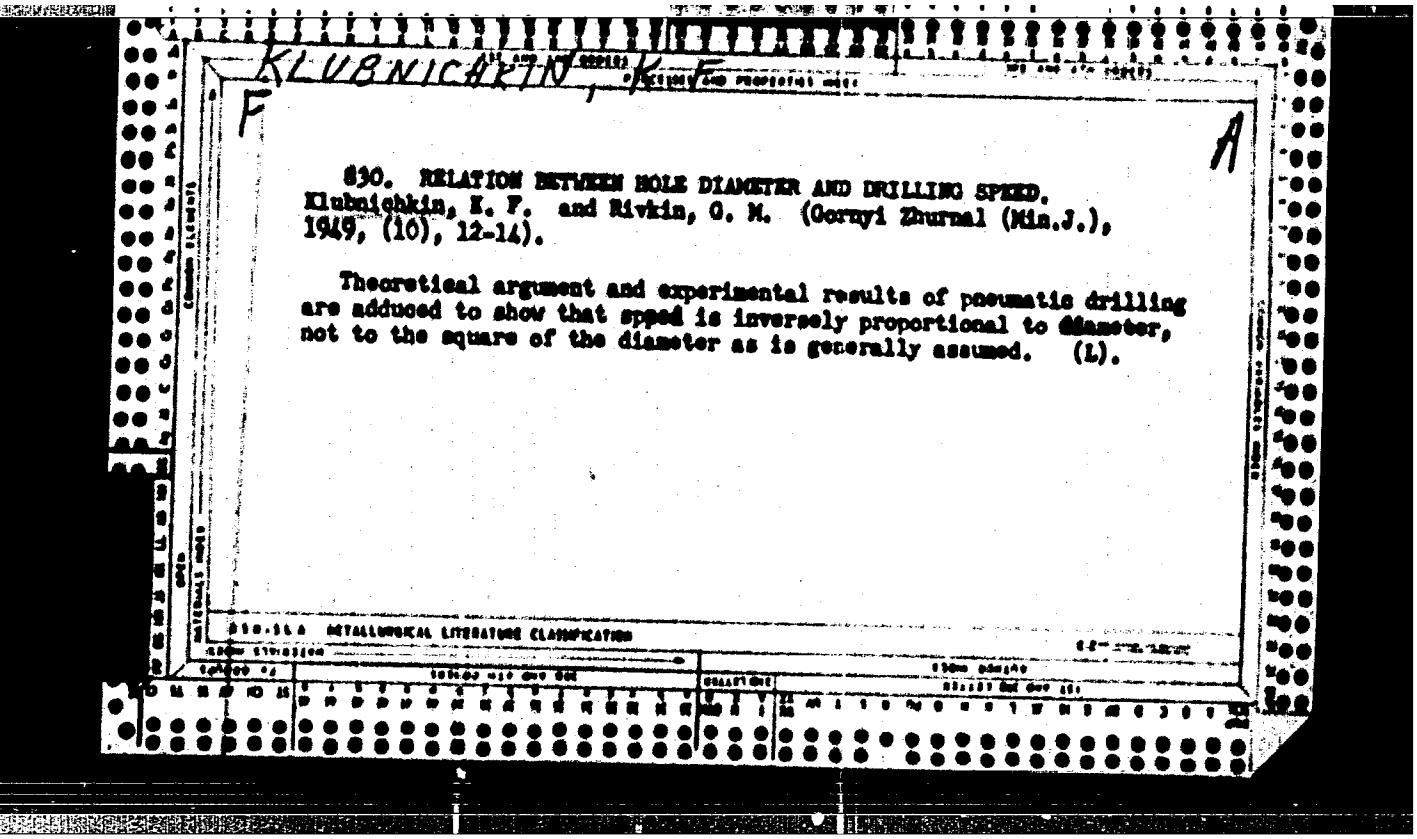
REVAZASHVILI, B.I., inzh.; IVANOV, N.A., inzh.; KLUBIN, Ye.P., inzh.

Automatic feeder for reagents. Gor. zhur. no.7:53-54 Jl '64.
(MIRA 17:10)

1. Institut Kazmekhanobr, Alma-Ata.

DOBROKHOTOV, V.D.; KLUBNICHKIN, A.K.; LEONT'YEV, Ye.V.

Certain conditions for the operation of compressor stations with centrifugal pumps. Trudy VNIIGAZ no.21/29:96-112 '64.
(MIRA 17:9)



KLUBNICHKIN, K. F.

F

A

830. RELATION BETWEEN HOLE DIAMETER AND DRILLING SPEED. Klubnichkin, K. F. and Rivkin, G. M. (Gornyi Zhurnal (Min.J.), 1949, (10), 12-14).

Theoretical argument and experimental results of pneumatic drilling are adduced to show that speed is inversely proportional to diameter, not to the square of the diameter as is generally assumed. (L).

18.1295 1416, 1496, 1454 S/136/61/000/001/004/010
E193/E583

AUTHOR: Klubnichkin, K.F., Candidate of Technical Sciences

TITLE: Application of Rare Elements

PERIODICAL: Tsvetnyye metally, 1961, No.1, pp.60-66

TEXT: Referring to the recent Exhibition of Achievements of the USSR National Economy, the author of the present article describes the layout of the stand, devoted to rare metals ("rare" in this context meaning less commonly used), and discusses in general terms various industrial applications of these materials. The specific applications mentioned in the article include the following: (1) Use of a zirconium concentrate in the preparation of coatings for casting moulds. Economies attained by replacing the conventional silica-base coatings with the new medium amount to 200 roubles per 1 ton of castings. (2) Use of zirconium as an alloying addition to steels. The hardenability of zirconium-bearing steels is double that of conventional materials, their castability (flowing properties) is also better, the stability of the oxide film is 3 to 6 times higher and their corrosion resistance to water is also double that of zirconium-free steels. Steels А45Ц (A45Ts), 30ХЦ (30KhTs), 45ХЦ (45KhTs) and 30ХГТЦ (30KhGTTs), are typical

Card 1/3

S/136/61/000/001/004/010
E193/E583

Application of Rare Elements

examples of zirconium-bearing steels. (3) Use of zirconium for spraying various parts of electronic valves and getters, and in the manufacture of high voltage capacitors. (4) Application of zirconium borides, carbides, and oxides in the manufacture of heat-resistant components and thermocouples (a thermocouple ПТ-3 (PT-3), in which zirconium carbide is used, is capable of measuring temperatures up to 2600°C when used in vacuum or in a neutral atmosphere). (5) Application of zirconia for furnace linings in the metallurgical and glass industries. (6) Application of zirconia in the manufacture of improved enamels. (7) Application of rare earths (cerium, neodymium and praseodymium) oxides in the manufacture of coloured glasses. (8) Application of rare earths in the manufacture of cast iron in which they serve as modifying elements, promoting spheroidization of graphite. A non-pyrophoric alloy, ФЦМ-5 (FTsM-5), containing 40 to 50% cerium, 20 to 25% lanthanum, 15 to 20% other rare earth elements, 4 to 7% magnesium, and up to 10% iron, has been developed for this purpose at the Giredmet Institute. (9) Application of corrosion-resistant, tantalum-tungsten, tungsten-

Card 2/3

S/136/61/000/001/004/010
E193/E583

Application of Rare Elements

rhenium, tantalum-niobium alloys in the electric lamp industry. (10) Application of titanium-base alloys, containing niobium, tantalum, rhenium, zirconium and beryllium additions in the manufacture of various plant for the chemical industry (11) Development of a new heat-resistant magnesium-base, casting alloy МЛ11 (ML11), containing 3% rare earth metals and 0.4% zirconium. Time-to-rupture of this alloy, at high temperatures, is double that of alloy МЛ5 (ML5), and it can be used at temperatures up to 350°C, as compared with maximum working temperature of 150°C in the case of ML5. (12) Use of less common metals to produce corrosion-resistant coatings by the metal-spraying technique. There are 2 figures.

ASSOCIATION: Giredmet

Card 3/3

DEREVYAGIN, N.P., inzh.; GONCHARUK, K.F., inzh.; ANTONOVA, G.T.; SHCHIPINA, N.Ye., kand. tekhn. nauk; KLUBNICHKIN, K.F., kand. tekhn. nauk, otv. red.; DOLGIKH, N.S., red.; DONSKAYA, G.D., tekhn. red.

[Uses of rare elements and titanium in chemical industries and analytical chemistry] Primenenie redkikh elementov i titana v khimicheskikh proizvodstvakh i analiticheskoi khimii; obzor literatury. Moskva, Otdel nauchno-tekhn. informatsii, 1962. 64 p. (Informatsiia, no.27(38))

(MIRA 16:8)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti "Giredmet."
(Metals, Rare and minor) (Titanium)

S/136/62/000/006/005/005
E193/E383

AUTHOR: Klubnichkin, K.F.

TITLE: Conference on the application of rare elements

PERIODICAL: Tsvetnyye metally, no. 6, 1962, 88 - 90

TEXT: A conference on the application of rare elements in the metallurgical, machine-building, refractory and silicate industries was convened in Sverdlovsk on February 5-7, 1962. The conference, organized by the Government Department for Coordination of Research and Development at the Sovet Ministrov RSFSR (Council of Ministers of the RSFSR), was attended by delegates from 80 industrial undertakings, 200 educational establishments and 40 Councils of National Economy. More than 60 papers were delivered, of which 40 were devoted to the application of rare elements in metallurgy and the machine-building industry and 20 to their application in the silicate and refractory industries. The main objective of the conference was to exchange information on those applications of rare elements that have already been adopted in industrial practice and more than 30 papers dealt with problems of this type. Thus, it has

Card 1/6

Conference on ....

been established at the Tsentral'nyy nauchno-issledovatel'skiy avtomobil'nyy institut (Central Scientific Research Automobile Institute), Avtomotornyy institut "NAMI" (Auto-engine Institute "NAMI") and the Giredmet and Gor'kovskiy avtozavod (Gor'kiy Automobile Works) (GAZ) that in the manufacture of crankshafts it might, under certain conditions, be economical to replace magnesium-modified cast iron by cerium-modified material. Similarly, application of ferro-cerium in one of the shops of the Minsk Automobile Plant made it possible to attain the required structure in complex castings and to reduce the percentage of rejects due to shrinkage cracks.
A paper by Candidate of Sciences G.A. Torpanova was devoted to reporting the results of many years work at TsNIIChermet on zirconium steels А45Ц (A45Ts), 45ХЦ, 30ХГТЦ (30KhGTs), 45ХГТЦ (45KhGTTs) and 28ХВФЦ (28KhVFTs) and their industrial applications; in one particular case, replacing steel 40Х (40Kh)

Card 2/6

Conference on ....

by steel 40[illegible] (40KhTs) made it possible to combine stamping and heat-treatment in one operation, whereby the productivity was increased by 2 - 2.5 times.
The authors of 8 papers reported that addition of rare earth elements (RZE) increased the impact strength of constructional steels, improved the hot workability of steels 1Kh18N9T (1Kh18N9T) 04Kh19N18M3 (04Kh19N18M3), Kh20N80 (Kh20N80) and Kh23N18 (Kh23N18) and eliminated casting faults in constructional steels of type 37[illegible] (37KhS) and 36G2[illegible] (36G2S).
The results of many years' work at TsNIITmash on wrought and cast steels were reported in papers by Candidate of Technical Sciences Ya.Yo. Gol'shteyn (Chelyabinsk NII ChM), M.F. Sidorenko and Candidate of Technical Sciences N.S. Kreshchanovskiy (TsNIITmash). It was established that the impact strength of cast pearlitic steels of the types 20KhMFL and 15Kh1M1FL increased two to three times after addition of 0.1 - 0.3% RZE; In the case of austenitic steels Kh15N25M3 (Kh15N25MV) and Kh15N25M3V3 (Kh15N25M3V3), a higher impact strength, better weldability and higher resistance to hot cracking were attained

Card 3/6

Conference on ....

by this means.
Improvements in the casting and mechanical properties of manganese steels, type 30ГЛ, 35ГЛ, 15ГЗЛ (30GL, 35 GL, 15G3L), containing RZE were reported by Candidate of Technical Sciences V.N. Palisadov (Moskovskiy vechornyymetallurgicheskiy institut - Moscow Evening Metallurgical Institute).
RZE have been used for several years at the "Elektrostal'" Plant in the production of certain high-alloy steels.
Other new metallurgical developments reported at the conference included: a) wrought alloys МА13 and ВМД-1 (VMD-1) with thorium additions, ВМ65-1 (VM65-1) with 0.3 - 0.9% Zr, МА8 with 0.15 - 0.35% RZE and ВМ17 (VM17) with 2.5 - 3.5% RZE and the alloy МА11 with 2.5 - 4% Nd and 0.1 - 0.25% Ni, which is characterised by particularly good mechanical properties at 250 - 350 °C; b) cast manganese alloys МЛ9 (ML9) with 0.5% Zr and 3.0 - 3.8% Nd and an alloy МЛ11 (ML11), derived from МЛ10 (ML10) by the addition of 0.5% Zr, 2.5 - 4.0 RZE and 0.5% Zn, which is characterized by improved creep properties at 250 °C. Lastly,

Card 4/6

the alloy M[illegible]12 (ML12) with 0.7% Zr and 4 - 5% Zn, which is characterized by finely crystalline structure, a room-temperature strength of 25 - 27 kg/mm^2 and satisfactory performance at 200 °C or even (for short periods) at 250 °C; c) application of zirconia concentrates as materials of mould dressings brought about so marked an improvement in the finish of castings that it was possible to reduce by 50% the number of auxiliary personnel in the casting shop; at a consumption of 5 kg of Zr concentrate per 1 ton of castings a saving of 20 roubles per ton of castings was attained. Regarding developments in the refractory and silicate industries, the following items of particular interest are mentioned in the present paper:
a) replacing the conventional lining of glass-melting furnaces with zirconia blocks and fused mullite bricks with zirconia additions increased the life of the furnace from 6 - 8 to 15 - 20 months and improved the quality of the glass. Application of a refractory containing 33% ZrO_2 in the construction of various parts of glass-melting furnaces made it possible to

increase the run of the furnace from 11 - 15 to 36 - 48 months, to increase the operating temperature by 100 - 120 °C, to increase the productivity of the furnace and to reduce the risk of glass becoming contaminated by impurities picked-up from refractories; this refractory ("Bakor 33") can also be recommended for metallurgical applications;
b) zirconia refractories based on ZrO_2 are at present made only on an experimental scale, calcium and magnesium oxides having been found to be the best stabilizing additions;
c) RZE have been found useful in the production of refractory ware from borides, silicides and carbides, in the manufacture of enamels and as materials for both colouring and decolouring glasses;
d) a mixture of RZE is now being used as a polishing medium in the manufacture of commercial-quality glass.

KAS'YANOVA, N.A.; KLUMCHKIN, K.P.; SHKOL'NIKOV, E.M.

Efficiency of treatment with rare metal alloys. Lit.proizv. no.11:37 N '62. (MIRA 15:12)
(Cast iron—Metallurgy) (Rare earth metals)

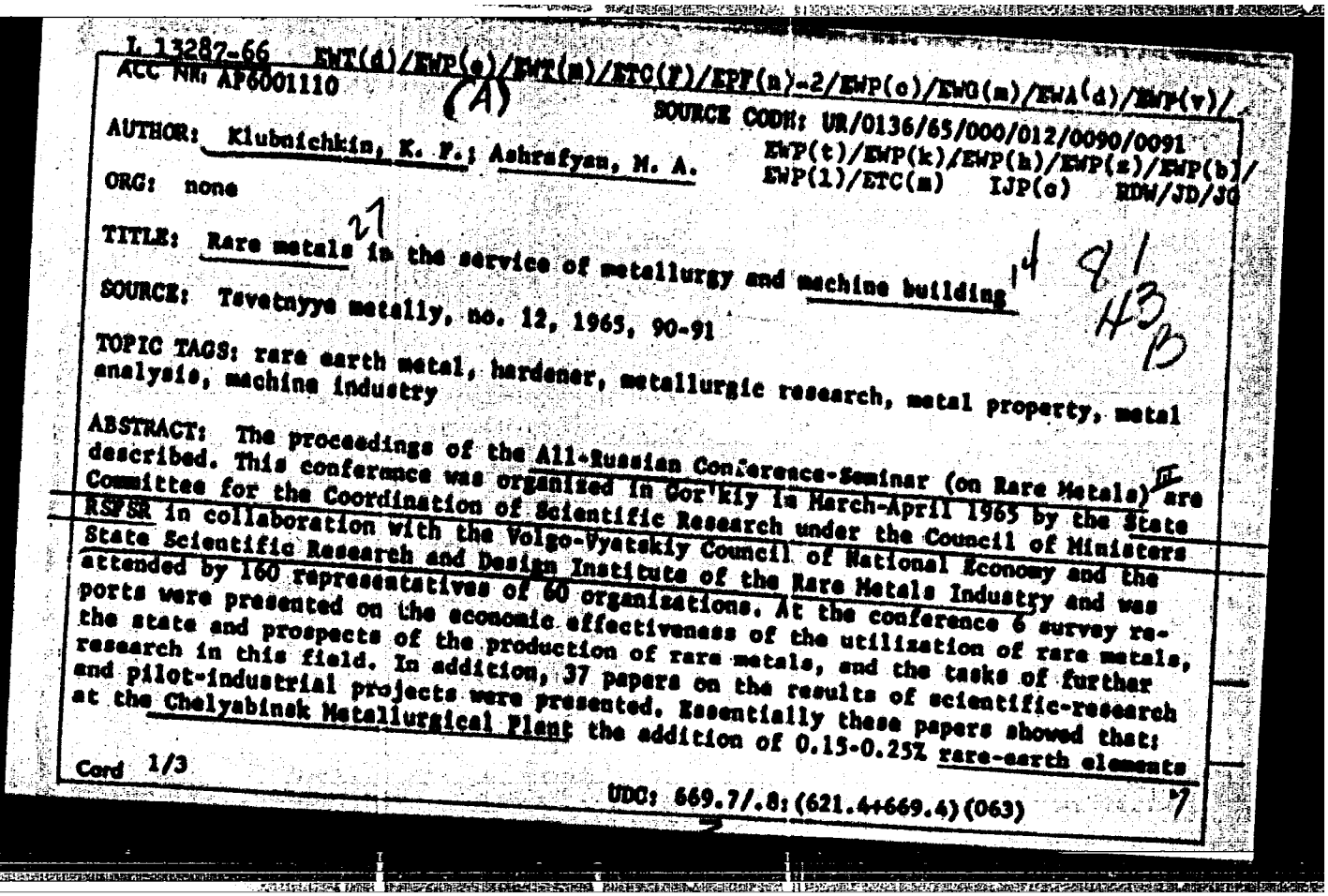
KLUBNICHKIN, K.F.

Conference on the use of rare elements. TSvet. met. 35 no.6:88-100 Je '62. (MIRA 15:6)

(Rare earth metals--Congresses)

KLUBNICHKIN, K.F.

Review of a book by E.M. Savitskii, V.F. Terekhova, I.V. Burov, A.I. Markova, O.P. Naumkin "Rare-earth metal alloys." Metalloved. i term. obr. met. no.8:64 Ag '63. (MIRA 16:10)



L 13287-66 EWT(d)/EWP(e)/EWT(m)/ETC(F)/EPF(n)-2/EWP(c)/EWG(m)/EWA(d)/EWP(v)/
ACC NR: AP6001110 (A) SOURCE CODE: UR/0136/65/000/012/0090/0091

AUTHOR: Klubnichkin, K. F.; Ashrafyan, M. A. EWP(t)/EWP(k)/EWP(h)/EWP(z)/EWP(b)/
EWP(l)/ETC(m) IJP(c) RDW/JD/JG

ORG: none

TITLE: Rare metals in the service of metallurgy and machine building

SOURCE: Tsvetnyye metally, no. 12, 1965, 90-91

TOPIC TAGS: rare earth metal, hardener, metallurgic research, metal property, metal analysis, machine industry

ABSTRACT: The proceedings of the All-Russian Conference-Seminar (on Rare Metals) are described. This conference was organized in Gor'kiy in March-April 1965 by the State Committee for the Coordination of Scientific Research under the Council of Ministers RSFSR in collaboration with the Volgo-Vyatskiy Council of National Economy and the State Scientific Research and Design Institute of the Rare Metals Industry and was attended by 160 representatives of 60 organizations. At the conference 6 survey reports were presented on the economic effectiveness of the utilization of rare metals, the state and prospects of the production of rare metals, and the tasks of further research in this field. In addition, 37 papers on the results of scientific-research and pilot-industrial projects were presented. Essentially these papers showed that: at the Chelyabinsk Metallurgical Plant the addition of 0.15-0.25% rare-earth elements

Card 1/3

UDC: 669.7/.8:(621.44+669.4)(063)

L 13287-66
ACC NR: AP6001110

(REM) enhanced 2-2.5 times the plasticity of ZM2T and ZI-481 high-alloy steels at 1100-1200°C; at the Zlatoust Metallurgical Plant the addition of REM to Kh20N80, Kh15N60 and EKh23N18 steel skelp increases the proportion of the defect-free tubes produced; the use of REM hardeners improves the plasticity and structure of 1Kh18N9T heat-resistant steel produced at several metallurgical plants. It was reported that the Voronezh Excavator Plant has built and dispatched to the Far North an experimental excavator in which 50 of the 85 tons it weighs are made of REM-containing steel. The conference also discussed studies of the successful tests of such alloy elements as Nb, B, Se, Te. It was also reported that, among other things, the Dnepropetrovsk Metallurgical Institute developed and introduced into industry the technology of the complex Ca-Mg inoculation of cast iron during the casting of rolling-mill rolls; the Belorussian Polytechnic Institute (O. S. Komarov and D. N. Khudokormov) investigated the effect of more than 20 elements on the processes of the crystallization of cast iron and drew a number of important conclusions. In particular, it suggested that not only REM but also, e. g. Zr and complex hardeners be used in the production of high-strength cast iron. The Giredmet and TsNIIChERMET reported on the status and prospects of the production of various hardeners: at present about 10 electrolytic hardeners are being produced and the experimental production of complex hardeners obtained by the furnace method has been organized; their composition may include nearly any rare metal plus Al, Si, Ca, etc. and preliminary findings indicate that, if mass-produced, "furnace" hardeners will be less expensive than electrolytic hardeners. Further, each ton of REM hardeners used produces savings of 12,000-15,000 rubles in the metallurgy of

Card 2/3

L 13287-66

ACC NR: AP6001110

steel and steel castings and 7,000-9,000 rubles in the production of iron castings. This has been confirmed by the operating experience of a number of plants. However, the widespread introduction of rare metals and primarily REM into industry is being hampered by a number of obstacles. Thus, the current volume and planned growth rate of the output of REM hardeners lag far behing the demand of metallurgy and machine building, and research into experimental hardeners is not conducted on an adequate scale. As a result, the cost of these hardeners is high. Similarly scientific research into the effects on the properties of metals of individual REM, Sr, Li, Se, Te, Zr, Hf, Nb, Ga, Tl, Rb, Cs, Be is not performed on a sufficient scale, and uniform methods of the analysis of the residual content of rare metals in steel, iron, etc, are not being employed. The conference adopted a detailed resolution which, if implemented, will make it possible to improve the quality of metallurgical output, to improve and intensify technological processes, and to attain considerable savings by introducing rare metals.

SUB CODE: 11, 13 SUBM DATE: none/ ORIG REF: 000/ OTH REF: 000

Card 3/3

SONGINA, O.A.; DAVITSKIY, Ye.M.; KLUBNICHKIN, K.F.; SHAPIRO, I.S.

Rare metals and technological progress. Review of the book by I.S. Stepanov. Tsvet. met. 38 no.6:95 Je '65.
(MIRA 18:10)

SUCHARZ, Oivon Hanna

Country: Poland

Academic Degrees: [not given]

Affiliation: [Presumed] Ludwik Hirszfeld Institute of Immunology and Experimental Therapy (Instytut Immunologii i Terapii Doswiadczalnej im Ludwika Hirszfelda), Polish Academy of Sciences (PAN--Polska Akademia Nauk), Wroclaw; Director: Prof. Stefan SLOPEK, Dr.

Source: Warsaw, Postepy Higieny i Medycyny Doswiadczalnej, Vol XV, No 4, 1961, pp 439-440.

Data: "Segregation of Influenza A_1, A_2, and B Viruses into Strains with Varying Sensitivity to Horse Serum Inhibitor."
English abstract of article originally published in Arch. Immunol. i Terapii Dosw. 1960, 8, 687.

Authors:
LORODZINSKA, M.
KLUBINSKA, B.

LOBODZINSKA, Maria; KLUBINSKA, Barbara

Segregation of influenza A, A_2 and B virus strains into strains with varying sensitivity to horse serum inhibitor. Arch.immun.ter. dosw. 8 no.4:687-694 '60.

1. Department of Virology, Institute of Immunology and Experimental Therapy of the Polish Academy of Sciences, Wroclaw.

(INFLUENZA VIRUSES) (IMMUNE SERUMS)

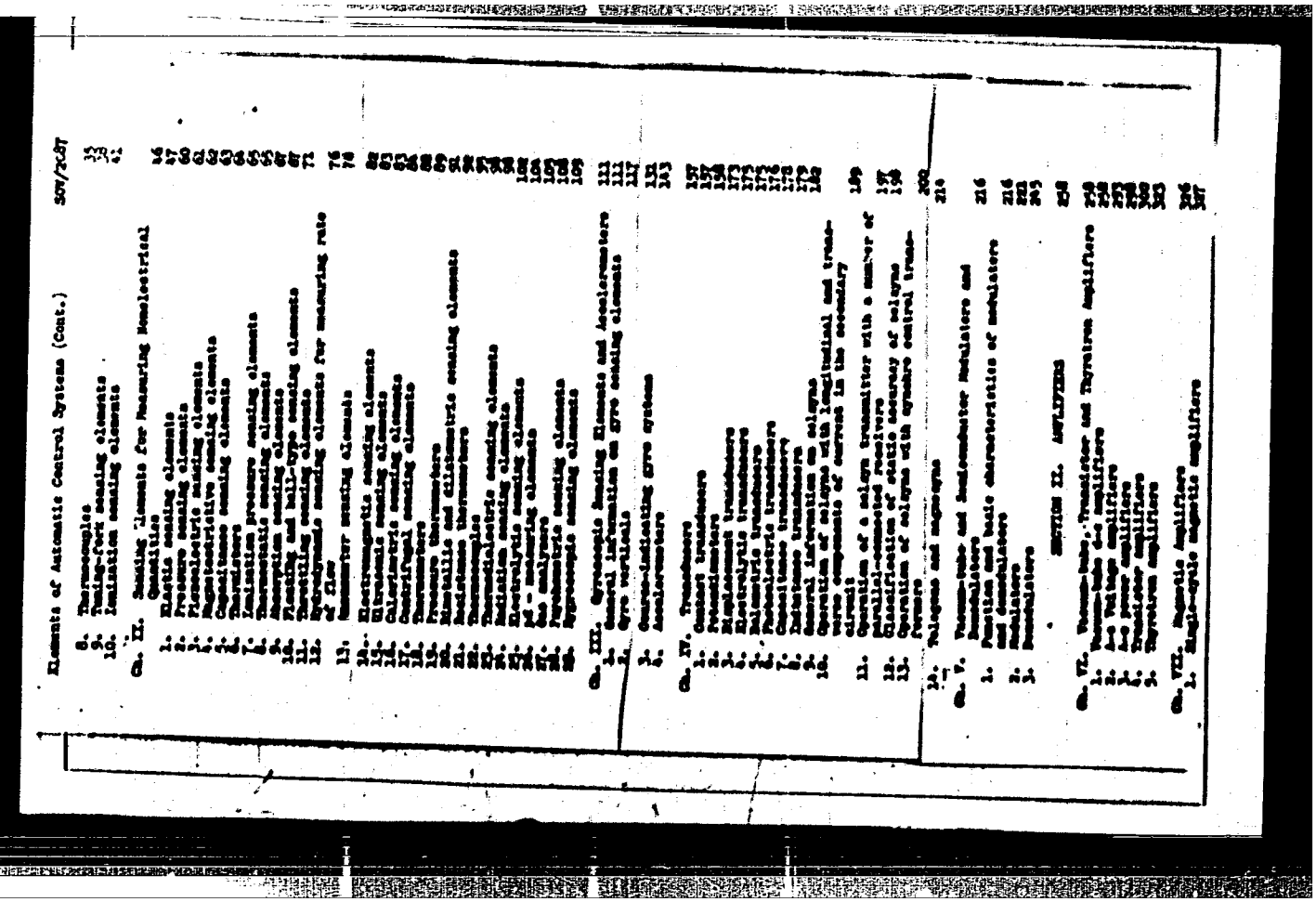
KLUMPKIN, R. P.

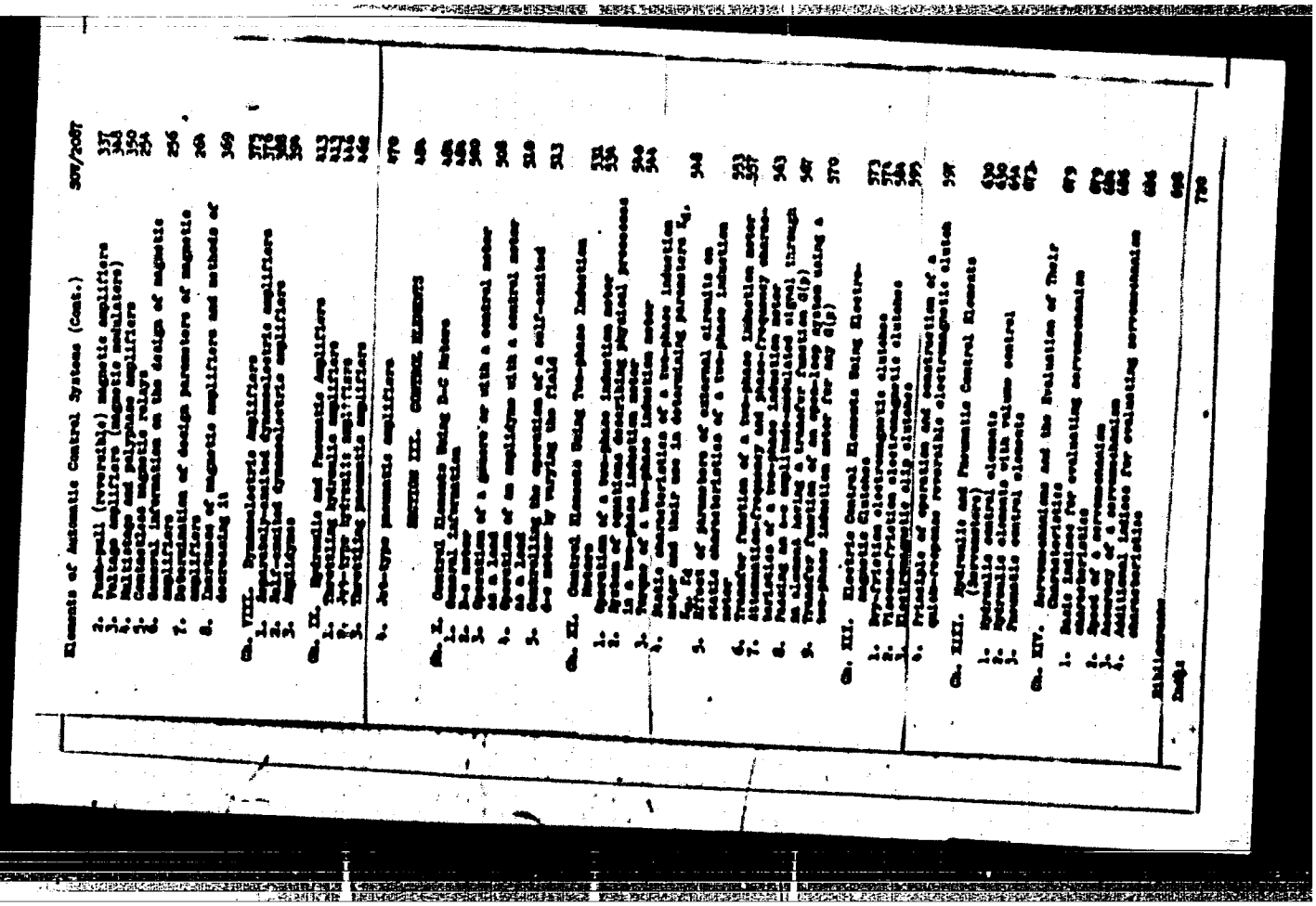
"Use of On-Line Digital Computer."

Paper to be presented at the IFAC Congress held in Basel, Switzerland, 27 Aug to 4 Sep 63

KLUBNIKIN, P.F.

Electromagnetic clutches for actuating mechanisms. Avtom. upr. i vych. tekh. no.1:205-227 '58. (MIRA 12:1)
(Servomechanisms)





KLUBNIKIN, P.F. (Moskva)

Combined follow-up systems with two drives. Avtom.i telem. 20 no.2: 161-175 F '59. (MIRA 12:3)
(Automatic control)

KLUBNIKIN, I.F. (Moskva)

Study of a servosystem with an electromagnetic induction clutch operating with low null currents [with summary in English]. Avtom. i telem. 21 no.7:964-972 Jl'60. (MIRA 13:10)
(Servomechanisms)

86256

169500 1031, 1121, 1232, 1137

S/103/60/021/011/013/014
B019/B067

AUTHOR: Klubnikin, P. F. (Moscow)

TITLE: Synthesis of Control Programs in Systems Containing a Digital Computer Device

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol. 21, No. 11, pp. 1554 - 1559

TEXT: The theory of pulse systems developed by Ya. Z. Tsypkin may be used to calculate the automatic control systems described here. These systems are widely applied in the industry. In the introduction it is pointed out that the problem of the synthesis of the control program of these systems has been little dealt with taking account of its realization. Its volume in the sense of the necessary amount of arithmetic operations and the storage elements of the machine is important for realizing the control program. A further important demand is the stability of the control program which, according to the author, is not sufficiently considered. The author assumes that the object is characterized by the transmission function:

Card 1/2

KLUBNIKIN, Petr Fedorovich; TITOV, V.K., kand. tekhn. nauk, retsenzent; ARIMOVA, A.G., red. izd-va; TIKHANOV, A.Ya., tekhn. red.

[Quick-acting induction clutches used in automatic control systems] Bystrodeistvuiushchie induktsionnye mufty v sistemakh avtomaticheskogo regulirovaniia. Moskva, Mashgiz, 1962. 218 p. (MIRA 15:3)
(Clutches (Machinery)) (Automatic control)

L 04837-67 EWP(k)/EWP(h)/EWT(d)/EWP(l)/EWP(v) GD

ACC NR: AT6016443 (A) SOURCE CODE: UR/0000/65/000/000/0388/0398

AUTHOR: Klubnikin, P. F.

55
B+1

ORG: none

TITLE: On effectuating a self-adaptive control program in a system with a digital computer

SOURCE: International Federation of Automatic Control. 14 International Congress. 2d, Basel, 1963. Diskretnyye i samonastraivayushchiyesya sistemy (Discrete and adaptive systems): trudy kongressa. Moscow, Izd-vo Nauka, 1965, 388-398

TOPIC TAGS: digital computer system, self adaptive control, computer programming, computer control system

ABSTRACT: Recently systems in which the plant is controlled with the aid of a digital computer have come into wide use. With proper programming such systems may acquire self-adaptation (self-adjustment) properties, even when there is no a priori information on all the properties of the plant and time variations in its parameters. The report deals with the compilation of a self-adaptive control program for a digital computer system and covers the method of self-adaptation in the control program and the results of experimental investigation.

Card 1/2

L 04837-67

ACC NR: AT6016443

It is concluded that the proposed method of constructing the self-adaptation program may be easily realized on a digital computer and requires a relatively small number of commands in the program. In order to determine the dynamic properties of the plant during normal operation of an automatic control system using a digital computer it is advisable to use a transmission function which is the equivalent of a difference equation. Here a good result in determining the coefficients of this function is given by the method described and based on the principle of the "teachable model". The experimental investigation has shown the effectiveness of a self-adaptive control program constructed on the method described. Orig. art. has: 17 formulas and 11 figures.

SUB CODE: 09, 13/ SUBM DATE 29Sep65/ ORIG REF: 003/ OTH REF: 002

Card 2/2

KLUBOV, A.A.

Stratigraphy, facies, tectonics, and oil-and gas-bearing prospects of Paleozoic sediments in the northwestern part of the Tengis Depression. Avtoref. nauch. trud. VNIGRI no.17:180-191 '56. (MIRA 11:6)

(Tengis Depression--Petroleum geology)
(Tengis Depression--Gas, Natural--Geology)

15-57-7-10048

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7, p 195 (USSR)

AUTHOR: Klubov, A. A.

TITLE: The Tengiz Basin (Tengizskaya Vpadina)

PERIODICAL: Tr. Vses. neft. n.-i. geologorazved. in-ta, 1956, Nr 96, pp 153-168

ABSTRACT: Three structural stages are distinguished in the Tengiz basin (Northern Kazakhstan): a lower, isoclinally folded metamorphic schists, chert-quartzites, marbles, and greenstones of pre-Paleozoic and lower Paleozoic age, forming the framework of the basin; a middle, slightly eroded continental and marine carbonate and clastic rocks of upper Devonian, Lower Carboniferous age and fresh-water lacustrine deposits of upper Paleozoic age; and an upper, almost flat-lying

Card 1/3

The Tengiz Basin (Cont.)

15-57-7-10048

A comparison of the section from the drill hole with sections from the southern and southwestern borders of the Tengiz basin has shown that the following beds are missing in the drill-hole section: sandy conglomerate beds of the Middle Carboniferous, Visean-Namurian deposits, the middle Visean subseries, the upper horizons of the lower Visean, carbonates of the lower Tournaisian subseries, Famennian carbonates, and part of the Frasnian series. The data from the drill hole refute the earlier belief that the lower Paleozoic is deeply buried and that there is a huge thickness of middle and upper Paleozoic rocks in the central part of the basin. The interpretation of seismic exploration, showing that there is a high, uplifted part of the basement in the Tengiz basin, has been confirmed.

Card 3/3

A. I. Suvorov

KLUBOV, B.A.

Ascertainment of Permian sediments on Barents Island (Spisbergen archipelago). Dokl. AN SSSR 162 no.3:629-631 My '65. (MIRA 18:5)

1. Nauchno-issledovatel'skiy institut geologii Arktiki. Submitted January 23, 1965.

KLUBOV, L. V.

Cand Tech Sci

Dissertation: "Differential Progressive Gear Boxes."

3 May 49

Moscow Automotive Mechanics Inst

SO Vecheryaya Moskva
Sum 71

KLUBOV, L.V., kand.tekhn.nauk

Using hydraulic converters in transmissions of passenger cars with low specific output. Avt.i trakt.prom. no.8:9-14 Ag '57. (MIRA 10:12)

1. Gosudarstvennyy soyuznyy ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut.
(Automobiles--Transmission devices)

Klubov, L.V.

AUTHOR: Klubov, L.V., Candidate of Technical Sciences 113-58-5-3/22

TITLE: About the Choice of a Type of Reduction Gears for a Hydro-mechanical Gear Box (O vybore tipa reduktora gidromekhanicheskoy korobki peredach)

PERIODICAL: Avtomobil'naya Promyshlennost', 1958, Nr 5, pp 5-10 (USSR)

ABSTRACT: The author describes in detail relative merits of planetary reduction gears and reduction gears with fixed axles. The planetary types are used mainly in the US, the fixed axle types in Western Europe, and in the Soviet Union, both types are used. As yet, a rational type of reductor gear does not exist. The author gives his preference to the reduction gear with fixed axles, because it is shorter and the general number of resisting and wearing-out surfaces in this type is 75% less than in the planetary type (table 2). The author also finds, that the use of planetary reduction gears by American automobile industry is explained by initial research work done by Ford, Wilson and GMC, and their successors had only to improve this system, without trying out the other type. There are

Card 1/2

About the Choice of a Type of Reduction Gears for a Hydromechanical Gear Box

113-58-5-3/22

2 tables, 7 figures, 1 photo and 1 Soviet reference.

ASSOCIATION: (NAMI)

AVAILABLE: Library of Congress

Card 2/2

1. Reduction gears-Planetary-Utilization

KLUBOV, V. A.

Brod, I. O., Yerofeenko, N. A. and Klubov, V. A. "The Genesis of Petroleum", (Resume of replies to a questionnaire on this topic sent out by the All-Union Scientific Research Institute for the Geological Prospecting of Petroleum), Vestnik Mosk. un-ta, 1948, No. 10, p. 211-20.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 10, 1949).

KLUBOV, V. A.

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 3, p 148 (USSR) 15-57-3-3494

AUTHOR: Klubov, V. A.

TITLE: The Identification of Natural Bitumens by Genetic Indications (Ob identifikatsii prirodnykh bitumov po geneticheskomu priznaku)

PERIODICAL: Tr. n.-i. in-ta geofiz. i geokhim. metodov razvedki, 1954, Nr 2, pp 110-124

ABSTRACT: Bibliographic entry

Card 1/1

KLUBOV, V.A.; KOPTEV, A.P.

Apparatus for the transformation of electric logging diagrams.
Razved.i prom.geofiz. no.10:44-47 '54. (MIRA 13:2)
(Oil well logging, Electric)

KLUBOV, V. A.

AID P - 337

Subject : USSR/Mining

Card : 1/2

Author : Klubov, V. A.

Title : Trends in the development of gas-surveying methods in oil prospecting

Periodical : Neft. Khoz., v. 32, #5, 49-55, My 1954

Abstract : The author presents a review and analysis of various gas-surveying methods used by different oil prospectors. The physicochemical theory of gas-surveying was developed by V. A. Sokolov and the mathematical interpretation by P. L. Antonov. These theories are based on geological explanations of the geophysical anomalies and are intended for solution of the direct problem of search. The problem is confined to the determination of the effect of distribution of gas concentration in the sub-surface zone by means of selection of conditions for migration of gas stream from remote gas sources of different geometrical forms. Principles of effusion and diffusion

KLUBOV, V.A.

Using the shot-hole seismic method for geological mapping. Trudy MORI 29:225-233 '56. (MLRA 10:4)
(Prospecting--Geophysical methods)